

## 14-Piece Master Ball Joint Adapter Set

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**66958 Ball Joint Adapter Set**

### INSTRUCTIONS AND PRECAUTIONS

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<http://www.harborfreight.com>

#### **⚠ WARNING**

Read this material before using this product. Failure to do so can result in serious injury. **SAVE THIS MANUAL.**

When unpacking, make sure that the product is intact and undamaged.

If any parts are missing or broken, please call 1-800-444-3353 as soon as possible.

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**For technical questions or replacement parts, please call 1-800-444-3353.**



## SPECIFICATIONS TABLE

Sizes	Inner Diameter	Outer Diameter	Length
Receiving Cup	1-3/4"	2-1/8"	1/2"
	1-13/16"	2-1/4"	7/16"
Installing Tube	1-3/4"	2"	2-3/8"
	1-3/4"	2"	3"
Remover / Installer	3/4"	1-7/16"	1"
Receiving Tube	2"	2-1/4"	2"
	2-1/4"	2-1/2"	1-1/2"
	2-1/4"	2-1/2"	3/4"
	2-1/4"	2-1/2"	2-3/4"
	2-3/4"	3"	2-1/4"
	2-7/16"	2-3/4"	2-1/4"
	2-5/8"	2-7/8"	2-7/8"
	2-3/16"	2-7/16"	3-3/16"

<b>Applications</b>	Most GM®, Ford®, and Dodge® 2 & 4 WD Pickups, Vans, and SUV's through 1997
<b>Compatibility</b>	Use with 3-In-1 Service Kit (Model 38335)
<b>Material</b>	Forged, heat treated and machined carbon steel
<b>Screw Plug Size</b>	7/8" O.D. x 3" Long

### Important Safety Information

1. Keep work area clean and well lit. Cluttered or dark areas invite accidents.
2. Keep children and bystanders away while using this product. Distractions can cause you to lose control.
3. Stay alert, watch what you are doing and use common sense when using this product. Do not use this product while you are tired or under the influence of drugs, alcohol or medication. A moment of inattention while using this product may result in serious personal injury.
4. Use safety equipment. Always wear eye protection. Safety equipment such non-skid safety shoes, hard hat, or heavy duty work gloves used for appropriate conditions will reduce personal injuries.
5. Do not overreach. Keep proper footing and balance at all times. This enables better control of this product in unexpected situations.
6. Dress properly. Do not wear loose clothing or jewelry. Keep your hair, clothing and gloves away from moving

- parts. Loose clothes, jewelry or long hair can be caught in moving parts.
- Do not force this product. Use the correct product for your application. The correct product will do the job better and safer at the rate for which it was designed.
  - Store this product out of the reach of children and do not allow people unfamiliar with the product or these instructions to operate the product. This product could be dangerous in the hands of untrained users.
  - Maintain this product. Check for misalignment or binding of parts, breakage of parts and any other condition that may affect the product's operation. If damaged, have this product repaired before use. Many accidents are caused by poorly maintained equipment.
  - Use this product in accordance with these instructions and in the manner intended for this particular type of product, taking into account the working conditions and the work to be performed. Use of this product for operations different from those intended could result in a hazardous situation.
  - Maintain labels and nameplates on the Adapter Set. These carry important safety information. If unreadable or missing, contact Harbor Freight Tools for a replacement.
  - Wear ANSI-approved safety goggles and heavy duty work gloves when using this product.
  - Prior to servicing a vehicle, **turn off the vehicle's engine** and refer to the vehicle manufacturer's service and repair manual for instructions on how to safely secure the vehicle in place with jacks, stands, etc.
  - The warnings, precautions, and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.

## Operating Instructions



Read the **ENTIRE IMPORTANT SAFETY INFORMATION** section at the beginning of this document including all text under subheadings therein before set up or use of this product.

### Attaching Plug Bolt to C-Frame

- NOTE:** This set is recommended for use with **Item 38335 3-In-1 Service Kit**, which is also available from Harbor Freight Tools.
- The illustration in Figure A below depicts a disassembled C-Frame, a tool that is part of the 3-In-1 Service Kit.

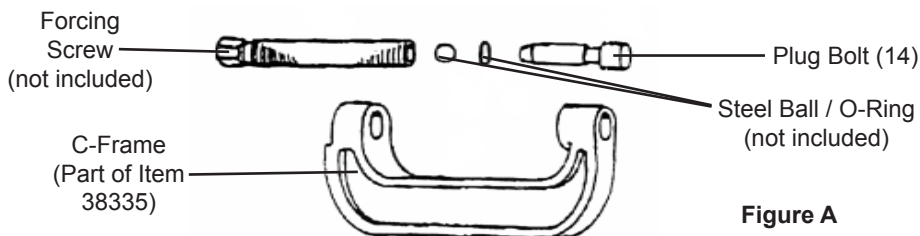


Figure A

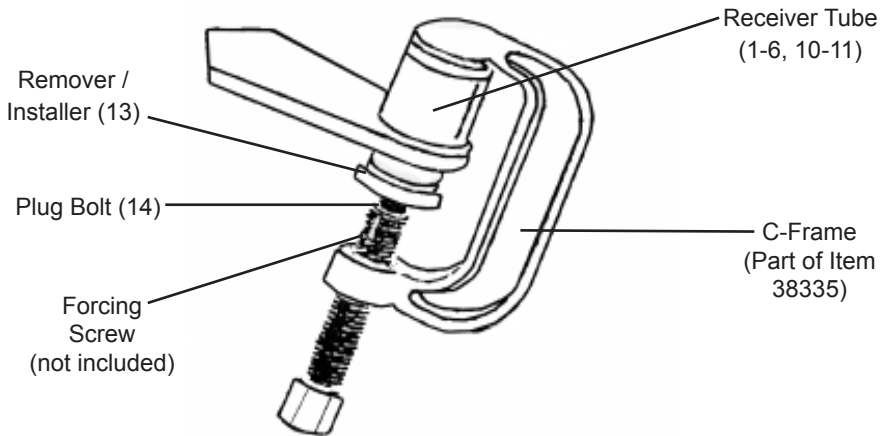
3. To operate Master Ball Joint Adapter Set, attach the Plug Bolt (part 14) to the C-Frame of the 3-In-1 Service Kit.
4. To do so, unscrew and remove the Forcing Screw, Steel Ball, and O-Ring from the C-Frame.
5. Make sure Steel Ball and O-Ring remain inside the Forcing Screw. Then insert Plug Bolt into Forcing Screw.
6. Screw threaded end of Forcing Screw, with its Steel Ball, O-Ring, and attached Plug Bolt back into threaded end of C-Frame toward unthreaded hole of C-Frame.

## Removing a Ball Joint

1. **NOTE:** The following instructions apply to most GM<sup>®</sup>, Ford<sup>®</sup>, and Dodge<sup>®</sup> 2 and 4 wheel drive pickups, vans, and SUV's through 1997 (see charts on pages 6 through 9). The instructions are intended to illustrate the process in general terms, and **NOT** to be

specific to any one make/model vehicle. A combination of Receiving Tubes (parts 1-6 and 10-11), Receiving Cups (parts 7 and 12), and Installing Tubes (parts 8-9), will be necessary for different vehicles.

2. Remove all attaching hardware from ball joint.
3. Mount Remover/Installer (13) on Forcing Screw assembly so that larger diameter portion of Remover/Installer faces threaded hole of C-Frame, and smaller diameter portion faces unthreaded side of ball joint. See Figure B below.)
4. Mount proper size Receiver Tube over threaded side of ball joint.
5. Align mounted Remover/Installer, ball joint, and Receiver Tube to allow removal of ball joint.
6. Using a wrench, turn Forcing Screw assembly clockwise to remove ball joint.



**Figure B**

## Installing a Ball Joint

1. Mount Remover/Installer (13) on Forcing Screw assembly so that the larger diameter portion of Remover/Installer faces the threaded hole of C-Frame and smaller diameter portion faces the unthreaded side of ball joint.
2. Place mounted Remover/Installer on unthreaded side of ball joint.
3. Align mounted Remover/Installer, ball joint, and proper size Receiver Tube (1-6, 10-11) to allow installation of ball joint.
4. Using a wrench, turn Forcing Screw assembly clockwise to install the ball joint.

## Maintenance and Servicing

1. **Before each use**, inspect general condition of tool. Check for misalignment or binding of moving parts, cracked or broken parts, and any other condition that may affect its safe operation. **Do not use damaged equipment.**
2. **After use**, clean external surfaces. Then dry and lubricate all moving parts. Do not use solvents.
3. **When storing**, keep Ball Joint Adapter Set and its accessories in its Carrying Case and store in a clean, dry, safe location.
4. **CAUTION!** All maintenance, service, and repairs not mentioned in this manual must only be performed by a qualified service technician.

## BALL JOINT ADAPTER APPLICATIONS

U = Upper, L = Lower, R = Remove, I = Install		Part Numbers Below Illustrated on Page 10													
Upper/ Lower	Vehicle	1	2	3	4	5	6	7	8	9	10	11	12	13	14
<b>FORD®</b>															
L	1986-97 Aerostar®							I							
U	1987-88 2WD Bronco II®							I							
U	1989-90 2WD Bronco II®							I	I						
L	1989-90 2WD Bronco II®							I							
U	1991-94 2WD Explorer®							I	I						
L	1991-94 2WD Explorer®							I							
U	1983-88 2WD Ranger®							I							
U	1989-97 2WD Ranger®							I	I						
U	1987-96 2WD 1/2-Ton Pickup					R		I	I					R	
L	1997 2WD & 4WD 1/2-Ton Pickup			I								R			I
U	1987-97 2WD 3/4-, 1-Ton Pickup					R		I	I					R	
U	1981-86 2WD 1/2-Ton Pickup							I							
L	1981-86 2WD 1/2-Ton Pickup							I	I		R				
U	1990 4WD Bronco II® with Dana 28							I							
U	1984-89 4WD Bronco II®							I							
L U	1980-96 4WD Bronco®							I	I		R				
U	1991-94 4WD Explorer® with Dana 28							I							
U	1991-97 4WD Ranger® with Dana 28							I							
U	1983-89 4WD Ranger®							I							
L U	1980-96 4WD Bronco®							I	I		R				
L	1981 4WD 1-Ton (3800 axle)							I	I		R				
L	1980-96 4WD 1/2-, 3/4-Ton							I	I		R				
L	1987-97 2WD 1/2-, 3/4-Ton						I				I				R I
U	1992-97 2WD 1/2-, 3/4-, 1-Ton Van			R				I						R	

## BALL JOINT ADAPTER APPLICATIONS

U = Upper, L = Lower, R = Remove, I = Install		Part Numbers Below Illustrated on Page 10													
Upper/ Lower	Vehicle	1	2	3	4	5	6	7	8	9	10	11	12	13	14
<b>FORD® (CONTINUED)</b>															
L	1992-97 2WD 1/2-Ton Van							I							
L	1992-97 2WD 3/4-, 1-Ton Van				R			I							
L	1984-89 4WD Bronco II®						I								
L	1990 4WD Bronco II® with Dana 28						I								
L U	1990 4WD Bronco II® with Dana 35						I								
U	1991-93 4WD Explorer® with Dana 35						I								
U	1990-93 4WD Ranger® with Dana 35						I								
U	1992-97 4WD 1-Ton							I	I		R				
U	1980-96 4WD 1/2-, 3/4-, 1-Ton (IFS)							I	I		R				
L U	1993-94 4WD Explorer® with Dana 35						I								
L U	1993-97 4WD Ranger® with Dana 35						I								
L	1996-97 4WD 1-Ton with Solid Axle						I				I				R I
L	1980-95 4WD 3/4-, 1-Ton Spindle						I				I				R I

## BALL JOINT ADAPTER APPLICATIONS

U = Upper, L = Lower, R = Remove, I = Install		Part Numbers Below Illustrated on Page 10													
Upper/ Lower	Vehicle	1	2	3	4	5	6	7	8	9	10	11	12	13	14
<b>DODGE® / CHRYSLER® / PLYMOUTH®</b>															
L	1987-97 2WD Dakota®					R I		I							R
L	1972-93 1/2-, 3/4-Ton 2WD Pickup					R I		I							R
L	1974-93 1/2-Ton 2WD Ramcharger®					R I		I							R
L	1979-97 1/2-, 3/4-, 1-Ton 2WD Van					R I		I							R
L	1972-93 2WD 3/4-, 1-Ton Pickup						I								R
L	1979-97 1-Ton 2WD Van						I								R
L	1984-96 Caravan®, Voyager®, Town & Country®														R
U	1994-97 2WD 1/2-, 3/4-, 1-Ton Pickup (IFS)							I							
L	1994-97 2WD 1/2-, 3/4-, 1-Ton Pickup (IFS)							I							
U	1994-97 2WD 1-Ton Solid Axle							I	I						
L	1994-97 2WD 1-Ton Solid Axle							I			I				R I
U	1994-97 3/4-, 1-Ton Dana® 60 Axle, 4WD							I	I						
L	1994-97 3/4-, 1-Ton Dana® 60 Axle, 4WD							I			I				R I
LU	1994-97 1/2-, 3/4-Ton Dana® 44 Axle, 4WD					R					I		I	R	
L	1972-93 1/2-, 3/4-, 1-Ton 4WD & Ramcharger®					R				I			I	R	
U	1972-93 1/2-, 3/4-, 1-Ton 4WD & Ramcharger®							I	I		R				

Record Serial Number Here: \_\_\_\_\_

**Note:** If product has no serial number, record month and year of purchase instead.



## BALL JOINT ADAPTER APPLICATIONS

<b>U = Upper, L = Lower, R = Remove, I = Install</b>		<b>Part Numbers Below Illustrated on Page 10</b>													
Upper/ Lower	Vehicle	1	2	3	4	5	6	7	8	9	10	11	12	13	14
<b>GENERAL MOTORS®</b>															
L	1982-97 2WD S-10 Blazer®, Jimmy, Pickup							I	R		I				
L	1985-97 Astro Safari® Van							I							
L	1973-95 2WD 1/2-, 3/4-Ton G Van							I							
L	1996-97 4WD 1/2-, 3/4-, 1-Ton	R	I					I							
<b>JEEP®</b>		1	2	3	4	5	6	7	8	9	10	11	12	13	14
L U	1993-97 2WD Grand Cherokee®					R				I			I	R	
L U	1993-95 4WD Grand Cherokee®, Grand Wagoneer®					R				I			I	R	
U	1987-97 4WD Wrangler®					R				I			I	R	
U	1984-95 4WD Cherokee®, Wagoneer®					R				I			I	R	
L	1990-97 2WD Cherokee®, Comanche®, Wagoneer®					R				I			I	R	
L	1990-97 4WD Wrangler®					R				I			I	R	
L	1990-95 2WD & 4WD Cherokee®, Comanche®, Wagoneer®					R				I			I	R	
U	1984-97 2WD Cherokee®, Comanche®, Wagoneer®					R				I			I	R	
L	1984-89 2WD Cherokee®, Comanche®, Wagoneer®					R				I			I	R I	
L	1987-89 4WD Wrangler®					R				I			I	R I	
L	1984-89 4WD Cherokee®, Comanche®, Wagoneer®					R				I			I	R I	
L U	1984-92 Full Size 4WD Grand Wagoneer®							I	I		R				
L U	1972-88 4WD Truck, CJ®, Full Size Cherokee®, Wagoneer®							I	I		R				

# Parts List and Diagram

Part	Description	Qty
1	Receiving Tube	1
2	Receiving Tube	1
3	Receiving Tube	1
4	Receiving Tube	1
5	Receiving Tube	1
6	Receiving Tube	1
7	Receiving Cup	1
8	Installing Tube	1

Part	Description	Qty
9	Installing Tube	1
10	Receiving Tube	1
11	Receiving Tube	1
12	Receiving Cup	1
13	Remover / Installer	1
14	Plug Bolt	1
15	Carrying Case	1



## PLEASE READ THE FOLLOWING CAREFULLY

NEITHER THE MANUFACTURER OR DISTRIBUTOR MAKES ANY REPRESENTATION OR WARRANTY OF ANY KIND TO THE BUYER THAT HE OR SHE IS QUALIFIED TO MAKE ANY REPAIRS TO THE PRODUCT, OR THAT HE OR SHE IS QUALIFIED TO REPLACE ANY PARTS OF THE PRODUCT. IN FACT, THE MANUFACTURER AND/OR DISTRIBUTOR EXPRESSLY STATES THAT ALL REPAIRS AND PARTS REPLACEMENTS SHOULD BE UNDERTAKEN BY CERTIFIED AND LICENSED TECHNICIANS, AND NOT BY THE BUYER. THE BUYER ASSUMES ALL RISK AND LIABILITY ARISING OUT OF HIS OR HER REPAIRS TO THE ORIGINAL PRODUCT OR REPLACEMENT PARTS THERETO, OR ARISING OUT OF HIS OR HER INSTALLATION OF REPLACEMENT PARTS THERETO.

## LIMITED 90 DAY WARRANTY

Harbor Freight Tools Co. makes every effort to assure that its products meet high quality and durability standards, and warrants to the original purchaser that this product is free from defects in materials and workmanship for the period of 90 days from the date of purchase. This warranty does not apply to damage due directly or indirectly, to misuse, abuse, negligence or accidents, repairs or alterations outside our facilities, criminal activity, improper installation, normal wear and tear, or to lack of maintenance. We shall in no event be liable for death, injuries to persons or property, or for incidental, contingent, special or consequential damages arising from the use of our product. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation of exclusion may not apply to you. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS.

To take advantage of this warranty, the product or part must be returned to us with transportation charges prepaid. Proof of purchase date and an explanation of the complaint must accompany the merchandise. If our inspection verifies the defect, we will either repair or replace the product at our election or we may elect to refund the purchase price if we cannot readily and quickly provide you with a replacement. We will return repaired products at our expense, but if we determine there is no defect, or that the defect resulted from causes not within the scope of our warranty, then you must bear the cost of returning the product.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

***PITTSBURGH***<sup>®</sup> **AUTOMOTIVE**

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